

## **WRIGHT-PATTERSON AFB, OH UTILITY SYSTEM DESCRIPTIONS**

**General:** Wright-Patterson AFB, located 10 miles east – northeast of Dayton in Greene County, Ohio, is headquarters for the Air Force Material Command (AFMC). The mission of the AFMC is to research, develop, test, deliver and logistically supports every Air Force weapon system. Wright-Patterson AFB occupies 8,145 acres with approximately 1,600 facilities on base plus 2,354 units of family housing.

**System Descriptions:** The following information provided is only an estimate and is subject to change.

**Electrical:** Dayton Power and Light (DP&L) provides power to Wright-Patterson via a 69 kV line. A secondary emergency delivery point is limited to 30 MVA. The on-base distribution system was installed in the late 1950s. The 69-kV transmission system delivers power to nine substations consisting of 69-kV circuit breakers, transformers and secondary switch gear. The overhead and underground distribution systems are in good condition, and the overhead system has generous excess capacity.

**Natural Gas:** Gas is supplied to the base by DP&L at 11 metering stations at a maximum pressure of 45 psig. The on-base distribution system consists of approximately 131,000 linear feet of underground piping with numerous service regulators reducing line pressure at each building. The piping consists of approximately 68% polypropylene, 28% steel, and 2% cast iron. The entire distribution system has a weighted average age of 20 years. Wright-Patterson currently uses approximately 20% of the total system capacity.

**Potable Water:** Water is obtained entirely from wells drilled into the aquifer underlying the base. The base is divided into three areas with each area having separate well, treatment facilities and distribution systems. Volatile organic chemical (VOC) contamination has been detected in almost all of the drinking water wells; the treatment process therefore includes VOC removal (through air stripping units), scaling control, chlorination and, for housing areas, fluoridation. Potable water is stored in both ground level and elevated reservoirs in each area of the base; each area has electric pumps to transfer water to elevated storage, as well as diesel pumps for emergency purposes. Excess capacity exists in all areas, with areas A, B, and C having excess capacities of 3.6 mgpd, 2.28 mgpd and 7.7 mgpd respectfully.

**Sanitary Wastewater:** The wastewater collection system centralizes all waste at one point, where it is pumped by an on-base pumping station via a 20-inch main to its ultimate discharge into the City of Dayton collection system. The collection system consists of approximately 70% vitreous clay pipe and 30% sewer drain pipe; the average age of the collection system is 35 years. Approximately 0.8 mgpd excess capacity exists in this system.

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